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John C. Parsons

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/883,520
Filing Date: June 18, 2001
Appellant(s): PARSONS ET AL.

Michael W. Ferrell
For Appellants

EXAMINER'S ANSWER

This is in response to the appeal brief filed June 10, 2008, appealing from the Office action mailed September 24, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

Examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is substantially correct. It should be noted that claim 22 as cited in the Claims Appendix does not recite an "A" preceding "non-woven material comprising." Claim 22, as previously presented, recited "A non-woven material comprising" and therefore it is believed that the error is a typographical error.

(4) Status of Amendments After Final

Appellants' statement of the status of amendments after final rejection contained in the brief is correct.

The amendment after final rejection filed on April 21, 2008, has been entered.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

Appellants' statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,521,266	LAU	05-1996
5,631,317	KOMATSU	05-1997
5,976,694	TSAI	11-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102/103

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 8, 10, 13, 18-24, 26, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by, or alternatively under 35 U.S.C. 103(a) as obvious over, USPN 5,521,266 to Lau.

Regarding claims 18-22, Lau teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by

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weight of at least one non-hydrophilic monomer and a polymeric colloid component, wherein said polymer component is emulsion polymerized using said colloid component as a stabilizer, (see entire document including column 2 lines 27-52, column 4 lines 9-37, column 5 line 7 to column 6 line 11, column 8 lines 12-24, Table 5.1).

Regarding claims 18-22, Lau does not appear to teach that the latex polymer composition forms films that are dispersible rather than soluble in tap water in that a film formed from the polymer breaks into small discrete particles that can be filtered out, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt. However, the claimed properties are deemed to be inherent to the structure in the prior art since the Lau reference teaches an invention with a similar structural and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Appellants to prove otherwise. Additionally, it would have been obvious to one of ordinary skill in the emulsion binder art at the time the invention was made to form the emulsion binder of Lau wherein the polymer component comprises 100 weight percent of a hydrophilic monomer and the hydrophilic monomer is methacrylic acid, as Lau teaches that the hydrophilic monomer may comprise about 100 weight percent and the use of the optimum or workable ranges discovered by routine experimentation is within the ordinary skill in the art. In this optimization, the properties would additionally appear to be inherent.

Regarding claim 18, the hydrophilic monomer is selected from the group consisting of an acidic monomer containing a carboxylic acid moiety, dicarboxylic acid moiety, a sulfonic acid moiety, or combinations thereof (column 5 lines 7-25).

Regarding claim 19, the hydrophilic monomer is selected from the group consisting of acrylic acid, methacrylic acid, and combinations thereof (column 5 lines 7-25).

Regarding claim 20, the non-hydrophilic monomer is selected from the group consisting of (meth)acrylates, maleates, (meth)acrylamides, vinyl esters, and combinations thereof (column 4 lines 9-37).

Regarding claim 21, the non-hydrophilic monomer includes (meth)acrylates (column 4 lines 9-37).

Regarding claims 8, 10, 13, 23, and 24, Lau teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes at least one hydrophilic monomer selected from the group consisting of acidic monomers containing a carboxylic acid moiety, dicarboxylic acid moiety, a sulfonic acid moiety, or combinations thereof, and at least one non-hydrophilic monomer selected from the group consisting of (meth)acrylates, maleates, (meth)acrylamides, vinyl esters, and combinations thereof, and a polymeric colloid component, wherein said polymer component is emulsion polymerized using said colloid component as a stabilizer, (see entire document including column 2 lines 27-52, column 4 lines 9-37, column 5 line 7 to column 6 line 11, column 8 lines 12-24, Table 5.1).

Regarding claims 8, 10, 13, 23, and 24, Lau does not appear to teach that the latex polymer composition forms films that are dispersible rather than soluble in tap water in that a film formed from the polymer breaks into small discrete particles that can be filtered out, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt.

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However, the claimed properties are deemed to be inherent to the structure in the prior art since the Lau reference teaches an invention with a similar structural and chemical composition as the claimed invention. Additionally, it would have been obvious to one of ordinary skill in the emulsion binder art at the time the invention was made to form the emulsion binder of Lau wherein the polymer component comprises 100 weight percent of a hydrophilic monomer and the hydrophilic monomer is methacrylic acid, as Lau teaches that the hydrophilic monomer may comprise about 100 weight percent and the use of the optimum or workable ranges discovered by routine experimentation is within the ordinary skill in the art. In this optimization, the properties would additionally appear to be inherent.

Regarding claim 8, the binder further comprises at least one component selected from the group consisting of plasticizers, tackifiers, fillers, humectants, surfactants, salts, fragrances, pigments, titanium dioxide, and encapsulated components (column 3 lines 43-67, column 5 line 63 to column 6 line 11).

Regarding claim 10, a non-woven article comprises the claimed non-woven material (column 8 lines 12-24).

Regarding claim 13, the Lau reference does not appear to disclose a wet tensile strength in 3 percent aqueous inorganic salt solution of at least 100 g/in, and a wet tensile strength in tap water of at least 40 g/in. However, the claimed properties are deemed to be inherent to the structure in the prior art since the Lau reference teaches an invention with a similar structural and chemical composition as the claimed invention.

Regarding claim 24, the colloid is present in the latex polymer in amounts of from 1 to 75 weight percent based on polymer solids (column 5 line 63 to column 6 line 11).

Regarding claim 26, Lau teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by weight of at least one non-hydrophilic monomer (see entire document including column 2 lines 27-52, column 4 lines 9-37, column 5 line 7 to column 6 line 11, column 8 lines 12-24, Table 5.1).

Regarding claim 26, Lau does not appear to teach that the latex polymer composition forms films that are dispersible rather than soluble in tap water in that a film formed from the polymer breaks into small discrete particles that can be filtered out, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt. However, the claimed property is deemed to be inherent to the structure in the prior art since the Lau reference teaches an invention with a similar structural and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Appellants to prove otherwise. Additionally, it would have been obvious to one of ordinary skill in the emulsion binder art at the time the invention was made to form the emulsion binder of Lau wherein the polymer component comprises 100 weight percent of a hydrophilic monomer and the hydrophilic monomer is methacrylic acid, as Lau teaches that the hydrophilic monomer may comprise about 100 weight percent and the use of the optimum or workable ranges discovered by routine experimentation is within the ordinary skill in the art. In this optimization, the properties would additionally appear to be inherent.

Regarding claim 27, Lau teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by weight of at least one non-hydrophilic monomer (see entire document including column 2 lines 27-52, column 4 lines 9-37, column 5 line 7 to column 6 line 11, column 8 lines 12-24, Table 5.1).

Regarding claim 27, Lau does not appear to teach that the latex polymer composition forms films that are dispersible rather than soluble in tap water in that a film formed from the polymer breaks into small discrete particles that can be filtered out, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt, and that the films are further characterized in that divalent ions do not inhibit redispersibility in water. However, the claimed property is deemed to be inherent to the structure in the prior art since the Lau reference teaches an invention with a similar structural and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Appellants to prove otherwise. Additionally, it would have been obvious to one of ordinary skill in the emulsion binder art at the time the invention was made to form the emulsion binder of Lau wherein the polymer component comprises 100 weight percent of a hydrophilic monomer and the hydrophilic monomer is methacrylic acid, as Lau teaches that the hydrophilic monomer may comprise about 100 weight percent and the use of the optimum or workable ranges discovered by routine experimentation is within the ordinary skill in the art. In this optimization, the properties would additionally appear to be inherent.

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3. Claims 8, 10, 13, 18-23, 26, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by, or alternatively under 35 U.S.C. 103(a) as obvious over, USPN 5,631,317 to Komatsu.

Regarding claims 18-22, Komatsu teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by weight of at least one non-hydrophilic monomer and a polymeric colloid component, wherein said polymer component is emulsion polymerized using said colloid component as a stabilizer, and wherein said latex polymer composition forms films that are dispersible rather than soluble in tap water, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt (see entire document including column 1 lines 7-48, column 2 lines 21-67, Example 10, column 4 lines 14-24, column 5 lines 1-61).

Regarding claims 18-22, Komatsu does not appear to teach that the film formed from the polymer breaks into small discrete particles that can be filtered out. However, the claimed property is deemed to be inherent to the structure in the prior art since the Komatsu reference teaches an invention with a substantially similar structure and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Appellants to prove otherwise. Additionally, the invention of Komatsu is dispersible in tap water and dissolved in a flush toilet (column 5 lines 45-61). Therefore, it appears that the invention of Komatsu breaks into small discrete particles capable of being filtered out.

Regarding claim 18, the hydrophilic monomer is selected from the group consisting of an acidic monomer containing a carboxylic acid moiety, dicarboxylic acid moiety, a sulfonic acid moiety, or combinations thereof (column 2 lines 20-67).

Regarding claim 19, the hydrophilic monomer is selected from the group consisting of acrylic acid, methacrylic acid, and combinations thereof (column 2 lines 20-67).

Regarding claim 20, the non-hydrophilic monomer is selected from the group consisting of (meth)acrylates, maleates, (meth)acrylamides, vinyl esters, and combinations thereof (column 2 lines 20-67, column 4 lines 7-24).

Regarding claim 21, the non-hydrophilic monomer includes (meth)acrylates (column 4 lines 7-24).

Regarding claim 8, 10, 13, and 23, Komatsu teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes at least one hydrophilic monomer selected from the group consisting of acidic monomers containing a carboxylic acid moiety, dicarboxylic acid moiety, a sulfonic acid moiety, or combinations thereof; and at least one non-hydrophilic monomer selected from the group consisting of (meth)acrylates, maleates, (meth)acrylamides, vinyl esters, and combinations thereof, and a polymeric colloid component, wherein said polymer component is emulsion polymerized using said colloid component as a stabilizer, and wherein said latex polymer composition forms films that are dispersible rather than soluble in tap water, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt (see

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entire document including column 1 lines 7-48, column 2 lines 21-67, Example 10, column 4 lines 14- 24, column 5 lines 1-61).

Regarding claims 8, 10, 13, and 23, Komatsu does not appear to teach that the film formed from the polymer breaks into small discrete particles that can be filtered out. However, the claimed property is deemed to be inherent to the structure in the prior art since the Komatsu reference teaches an invention with a substantially similar structure and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Appellants to prove otherwise. Additionally, the invention of Komatsu is dispersible in tap water and dissolved in a flush toilet (column 5 lines 45-61). Therefore, it appears that the invention of Komatsu breaks into small discrete particles capable of being filtered out.

Regarding claim 8, the binder further comprises at least one component selected from the group consisting of plasticizers, tackifiers, fillers, humectants, surfactants, salts, fragrances, pigments, titanium dioxide, and encapsulated components (column 4 lines 7 to column 5 line 40).

Regarding claim 10, a non-woven article comprises the claimed non-woven material (column 5 lines 58-61).

Regarding claim 13, the Komatsu reference does not appear to disclose a wet tensile strength in 3 percent aqueous inorganic salt solution of at least 100 g/in, and a wet tensile strength in tap water of at least 40 g/in. However, the claimed properties are deemed to be inherent to the structure in the prior art since the Komatsu reference teaches an invention with a similar structural and chemical composition as the claimed invention.

Regarding claim 26, Komatsu teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by weight of at least one non-hydrophilic monomer, wherein said latex polymer composition forms films that are dispersible rather than soluble in tap water, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt (see entire document including column 1 lines 7-48, column 2 lines 21-67, Example 10, column 4 lines 14- 24, column 5 lines 1-61).

Regarding claim 26, Komatsu does not appear to teach that the film formed from the polymer breaks into small discrete particles that can be filtered out. However, the claimed property is deemed to be inherent to the structure in the prior art since the Komatsu reference teaches an invention with a substantially similar structure and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Appellants to prove otherwise. Additionally, the invention of Komatsu is dispersible in tap water and dissolved in a flush toilet (column 5 lines 45-61). Therefore, it appears that the invention of Komatsu breaks into small discrete particles capable of being filtered out.

Regarding claim 27, Komatsu teaches a non-woven material comprising a web of fibers, and a latex polymer binder applied to the web of fibers, wherein said latex polymer binder has a glass transition temperature of from -40°C to 105°C and comprises a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by

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weight of at least one non-hydrophilic monomer, wherein said latex polymer composition forms films that are dispersible rather than soluble in tap water, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt, and wherein the films are further characterized in that divalent ions do not inhibit redispersibility in water (see entire document including column 1 lines 7-48, column 2 lines 21-67, Example 10, column 4 lines 14-24, column 5 lines 1-61, column 6 lines 50-62).

Regarding claim 27, Komatsu does not appear to teach that the film formed from the polymer breaks into small discrete particles that can be filtered out. However, the claimed property is deemed to be inherent to the structure in the prior art since the Komatsu reference teaches an invention with a substantially similar structure and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Appellants to prove otherwise. Additionally, the invention of Komatsu is dispersible in tap water and dissolved in a flush toilet (column 5 lines 45-61). Therefore, it appears that the invention of Komatsu breaks into small discrete particles capable of being filtered out.

Regarding claims 22, 23, 26 and 27, the limitation that the polymer component is emulsion polymerized using the colloid component as a stabilizer is a product by process limitation. Absent a showing to the contrary, it is Examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious

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from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. The burden has been shifted to Appellants to show unobvious difference between the claimed product and the prior art product. The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if Appellants intends to rely on Examples in the specification or in a submitted declaration to show unobviousness, Appellants should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

Regarding claims 22, 23, 26, and 27, it should be noted that the Declaration of October 26, 2006, page 5, section 10, states, "It would be within the general knowledge of those skilled in the polymer arts to make a resin with the claimed glass transition temperature of -40°C to + 105°C. That the Tg of the polymer can be easily controlled by the monomer composition, based on the Tg of the individual monomers." Additionally, in the event it is shown that Komatsu does not appear to teach the polymeric colloid component, it should be noted that the Declaration of March 6, 2007, page 2, section 5, states, "Generally, in emulsion polymerization processes, a stabilizing agent is proved to an aqueous medium where the stabilizing agent may include surfactants, emulsifiers, protective colloids or the like."

In the event it is shown that the Komatsu reference does not disclose the claimed invention with sufficient specificity, the invention is obvious because the Komatsu reference discloses the claimed constituents and discloses that they may be used in combination.

4. Claims 8, 10, 13, 18-23, 26, and 27 are rejected under 35 U.S.C. 103(a) as being obvious over Komatsu in view of Lau.

Regarding claims 8, 10, 13, 18-23, 26, and 27, in the event it is shown that Komatsu does not teach a polymer composition formed by emulsion polymerization using a colloid component as a stabilizer, Lau teaches a similar composition suitable as a nonwoven binder comprising from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by weight of at least one non-hydrophilic monomer and a polymeric colloid component, wherein the composition may be prepared by solution or emulsion polymerization (Lau, column 2 lines 27-52, column 4 lines 9- 37, column 5 line 7 to column 6 line 11, column 8 lines 12-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the binder of Komatsu with the polymerization methods taught by Lau, as the method of Lau is an equivalent method of forming an emulsion binder for use as a nonwoven binder.

5. Claims 2-6, 9, 11, 12, 16, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lau, as applied to claims 8, 10, 13, 18-24, 26, and 27 above, in view of USPN 5,976,694 to Tsai.

Regarding claims 2-6, 9, 11, 12, 16, and 25, Lau is silent with regards to specific properties of the non-woven material. Therefore, it would have been necessary and thus obvious to look to the prior art for conventional materials. Tsai provides this conventional teaching showing that it is known in the water-dispersible fabric art to use wood pulp fibers having a length of less than 0.5 cm in an air-laid non-woven material comprising 70 to 85 percent by weight of fibers, the non-woven material having a basis weight of from 20 to 200 gsm and

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further comprising a binder add-on of from 2 to 50 percent by weight (Tsai, see entire document including column 6 lines 38-58, column 5 lines 40-44, column 7 lines 10-18, column 7 lines 30-50, Examples 10-16). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the non-woven material from Lau with the specific properties, as taught by Tsai, motivated by the expectation of successfully practicing the invention of Lau.

Regarding claim 11, the nonwoven further comprises a lotion containing at least one ingredient selected from the group consisting of sodium chloride solution, preservatives, boric acid, bicarbonates, moisturizers, emollients, surfactants, humectants, alcohols, water, and fragrances (Tsai, column 8 lines 23-65).

Regarding claim 12, the non-woven article further comprises at least 0.5 percent by weight of inorganic salt, or a mixture of inorganic salt (Lau, column 5 lines 43-56).

It should be noted that claims 11 and 12 recite the “non-woven article of claim 9.” Although claim 9 does not recite a non-woven article, claim 10 is the only claim reciting a non-woven article. As best Examiner can determine, it appears that claims 11 and 12 are dependent from claim 10. Since the claims are still obvious over the prior art of record, as set forth above whether dependent from claims 9 or 10, the rejection remains proper.

6. Claims 2-6, 9, 11, 12, 16, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu, as applied to claims 8, 10, 13, 18-23, 26, and 27 above, in view of Tsai.

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Regarding claims 2-6, 9, 11, 12, 16, and 25, Komatsu is silent with regards to specific properties of the non-woven material. Therefore, it would have been necessary and thus obvious to look to the prior art for conventional materials. Tsai provides this conventional teaching showing that it is known in the water-dispersible fabric art to use wood pulp fibers having a length of less than 0.5 cm in an air-laid non-woven material comprising 70 to 85 percent by weight of fibers, the non-woven material having a basis weight of from 20 to 200 gsm and further comprising a binder add-on of from 2 to 50 percent by weight (Tsai, see entire document including column 6 lines 38-58, column 5 lines 40-44, column 7 lines 10-18, column 7 lines 30-50, Examples 10-16). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the non-woven material from Komatsu with the specific properties, as taught by Tsai, motivated by the expectation of successfully practicing the invention of Komatsu.

Regarding claim 11, the nonwoven further comprises a lotion containing at least one ingredient selected from the group consisting of sodium chloride solution, preservatives, boric acid, bicarbonates, moisturizers, emollients, surfactants, humectants, alcohols, water, and fragrances (Tsai, column 8 lines 23-65).

Regarding claim 12, the non-woven article further comprises at least 0.5 percent by weight of inorganic salt, or a mixture of inorganic salt (Komatsu, column 4 lines 52-66).

It should be noted that claims 11 and 12 recite the “non-woven article of claim 9.” Although claim 9 does not recite a non-woven article, claim 10 is the only claim reciting a non-woven article. As best Examiner can determine, it appears that claims 11 and 12 are dependent

from claim 10. Since the claims are still obvious over the prior art of record, as set forth above whether dependent from claims 9 or 10, the rejection remains proper.

7. Claims 2-6, 9, 11, 12, 16, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu in view of Lau, as applied to claims 8, 10, 13, 18-23, 26, and 27 above, and further in view of Tsai.

Regarding claims 2-6, 9, 11, 12, 16, and 25, Komatsu in view of Lau is silent with regards to specific properties of the non-woven material. Therefore, it would have been necessary and thus obvious to look to the prior art for conventional materials. Tsai provides this conventional teaching showing that it is known in the water-dispersible fabric art to use wood pulp fibers having a length of less than 0.5 cm in an air-laid non-woven material comprising 70 to 85 percent by weight of fibers, the non-woven material having a basis weight of from 20 to 200 gsm and further comprising a binder add-on of from 2 to 50 percent by weight (Tsai, see entire document including column 6 lines 38-58, column 5 lines 40-44, column 7 lines 10-18, column 7 lines 30-50, Examples 10-16). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the non-woven material from Komatsu in view of Lau with the specific properties, as taught by Tsai, motivated by the expectation of successfully practicing the invention of Komatsu.

Regarding claim 11, the nonwoven further comprises a lotion containing at least one ingredient selected from the group consisting of sodium chloride solution, preservatives, boric acid, bicarbonates, moisturizers, emollients, surfactants, humectants, alcohols, water, and fragrances (Tsai, column 8 lines 23-65).

Regarding claim 12, the non-woven article further comprises at least 0.5 percent by weight of inorganic salt, or a mixture of inorganic salt (Komatsu, column 4 lines 52-66).

It should be noted that claims 11 and 12 recite the “non-woven article of claim 9.” Although claim 9 does not recite a non-woven article, claim 10 is the only claim reciting a non-woven article. As best Examiner can determine, it appears that claims 11 and 12 are dependent from claim 10. Since the claims are still obvious over the prior art of record, as set forth above whether dependent from claims 9 or 10, the rejection remains proper.

(10) Response to Arguments

Rejection of Claims 8, 10, 13, 18-24, 26, and 27 under 35 U.S.C. 102(b) as being anticipated by, or alternatively under 35 U.S.C. 103(a) as obvious over Lau.

Contrary to the current rejection, Appellants argue that Lau does not suggest salt sensitive products having the claimed features, since the Lau polymers do not resemble the emulsion polymer binders used in the claimed invention and since the polymers are not dispersible in water into discrete particles as claimed. Additionally, Appellants argue that the “all elements rule” is clearly not satisfied, nor is the claimed subject matter suggested in any way. Additionally, Appellants argue that Lau does not disclose or teach that a colloid stabilizer can be critical to salt-sensitivity and redispersibility in water.

Regarding Appellants’ arguments, Examiner respectfully disagrees. Under 35 U.S.C. 103 (a), the obviousness of an invention cannot be established by combining the teachings of the prior art references absent some teaching, suggestion, incentive, or predictability supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221

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USPQ 929, 933 (Fed. Cir. 1984); *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1395-97 (2007). This does not mean that the cited prior art references must specifically suggest making the combination. *B.F. Goodrich Co. M Aircraft Braking Systems Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996); *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988)). A suggestion or motivation to combine references is an appropriate method for determining obviousness, however it is just one of a number of valid rationales for doing so. The test for obviousness is what the combined teachings of the prior art references would have suggested to those of ordinary skill in the art. *In re Young*, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991); *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). This test requires us to take into account not only the specific teachings of the prior art references, but also any inferences which one skilled in the art would reasonably be expected to draw therefrom. *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Additionally, the use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain. A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. MPEP 2123.

The person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art at the time of the invention. Factors that may be considered in determining the level of ordinary skill in the art may include: (1) “type of problems encountered in the art;” (2) “prior art solutions to those problems;” (3) “rapidity with which innovations are made;” (4) “sophistication of the technology; and” (5) “educational level of active workers in the

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field. In a given case, every factor may not be present, and one or more factors may predominate.” *In re GPAC*, 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995); *Custom Accessories, Inc. v. Jeffrey-Allan Industries, Inc.*, 807 F.2d 955, 962, 1 USPQ2d 1196, 1201 (Fed. Cir. 1986); *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696, 218 USPQ 865, 868 (Fed. Cir. 1983).

The claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. There is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of invention, but only that the subject matter is in fact inherent in the prior art reference.

The claimed invention is directed to non-woven material comprising fibers and a latex binder having the claimed glass transition temperature, wherein the binder comprises a polymer component and a polymeric colloid component, the polymer component being emulsion polymerized using the colloid component as a stabilizer, wherein the latex polymer composition forms films having the claimed properties. It should be noted that the claimed invention in claims 8, 10, 13, 18-22, 26, and 27 recite that the polymer component includes from 1 to 100 weight percent of a hydrophilic monomer and specifically from 0 to 99 percent by weight of at least one non-hydrophilic monomer. Therefore, the scope of those claims do not specifically require the inclusion of a non-hydrophilic monomer since the non-hydrophilic monomer may comprise 0 weight percent.

Lau teaches a non-woven material and a binder, the binder comprising a latex film prepared by emulsion polymerization (Lau, column 2 lines 26-52, column 8 lines 12-24, Example 7), and the binder having a glass transition temperature within the claimed range (Id.,

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Table 5.1). Lau teaches that the binder comprises from about 0.1% to about 100% by weight of a monomer component having low water solubility and from about 0% to about 99.9% by weight of at least one monomer having high water solubility (Id., column 2 lines 31-40). Lau teaches that the monomers having low water solubility may comprise ethylenically unsaturated monomers, vinyl esters, (meth)acrylates, and (meth)acrylamides (Id., column 4 lines 9-36), and Lau teaches that the monomers having high water solubility may comprise acrylic acid, methacrylic acid, itaconic acid, maleic anhydride and crotonic acid (Id., column 5 lines 7-25). The low water solubility monomer components are analogous to the claimed non-hydrophilic monomers as described in Appellants' specification, page 4 line 22 to page 5 line 10, and the high water solubility monomer components are analogous to the claimed hydrophilic monomers, as described in Appellants' specification, page 5 lines 11-21, and claimed in claims 20 and 21. Therefore, Lau teaches the claimed polymer component.

Additionally, Lau teaches an emulsion polymerization process comprising emulsifiers or dispersing agents employed for preparing the monomer or polymer emulsions which may be from about 0.1% to about 10% by weight (Id., column 5 line 63 to column 6 line 11). It should be noted that Appellants do not claim a specific colloid in the claims and that Appellants specification does not specify a polymeric colloid necessarily suitable for the claimed invention. Additionally, Appellants' Declaration of March 6, 2007, at section 5, recites that generally in emulsion polymerization processes, "a stabilizing agent is provided to an aqueous medium wherein the stabilizing agent may include surfactants, emulsifiers, protective colloids or the like." Therefore, the emulsifiers or dispersing agents of Lau appear to be within the scope of the claimed polymeric colloid component, absent evidence to the contrary.

In totality, Lau teaches a non-woven material comprising a web of fibers, and a latex polymer binder having the claimed glass transition temperature and comprising the claimed polymer component with the claimed hydrophilic monomer and the claimed non-hydrophilic monomer in the claimed percentages, and the claimed polymeric colloid component which is emulsion polymerized. As recited in the rejection of the claims based on Lau, Lau does not appear to teach that the latex polymer composition forms films that are dispersible rather than soluble in tap water in that a film formed from the polymer breaks into small discrete particles that can be filtered out, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt. However, the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *See* MPEP 2112. There is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of invention, but only that the subject matter is in fact inherent in the prior art reference.

The claimed properties are deemed to be inherent to the structure in the prior art since the Lau reference teaches an invention with a substantially similar structure and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Appellants to prove otherwise. Additionally, it would have been obvious to one of ordinary skill in the emulsion binder art at the time the invention was made to form the emulsion binder of Lau wherein the polymer component comprises 100 weight percent of a hydrophilic monomer and the hydrophilic monomer is methacrylic acid, as Lau teaches that the hydrophilic monomer may comprise about 100 weight percent and the use of the optimum or workable ranges discovered by routine experimentation is

within the ordinary skill in the art. In this optimization, the properties would additionally appear to be inherent.

Appellants argue that Lau does not suggest the salt sensitive products having the claimed features of the application since Appellants' Declaration of July 2007, recites that the polymers of Lau are not dispersible in water into discrete particles as claimed. The Declaration argues that the emulsion polymers of Lau are not dispersible in water, and their dispersibility would not change in response to salt concentration. The Declaration appears to suggest, as recited in Appellants' Brief at page 17, that polymers comprising only 0, 1 or 2% methacrylic acid would not be dispersible in water. Therefore, it appears that Appellants are arguing that the percentage of methacrylic acid, which Appellants' specification teaches comprise the hydrophilic monomer, is necessarily required to be greater than 2%. However, the Declaration is not persuasive for myriad reasons. First, the Declaration does not distinguish the claimed invention from the invention of Lau. Appellants' claimed invention requires 1 to 100 weight percent of a hydrophilic monomer (which may be methacrylic acid) and from 0 to 99 weight percent of at least one non-hydrophilic monomer (which may be methacrylates) which is emulsion polymerized. Similarly, as set forth above, Lau teaches the claimed hydrophilic monomer and the claimed non-hydrophilic monomer which is emulsion polymerized.

Second, the Declaration only sets forth an opinion and a conclusion which are not supported by objective evidence. For example, the Declaration sets forth that that the emulsion polymers shown in Table 4.2 of Lau are not dispersible in water, nor would their dispersibility change in response to salt concentration. However, the Declaration does not provide supporting

data for such a conclusion, nor does the Declaration recite that experiments were performed using the emulsion polymers of Lau in order to arrive at such a conclusion.

Third, contrary to Appellants' Declaration of July 2007, Appellants' specification does not teach or suggest that the percentage of the methacrylic acid is specifically either critical to the dispersibility property or that the percentage of methacrylic acid is necessarily required to be greater than 2%. Therefore, the Declaration's conclusion that the emulsion polymers are not dispersible in water due to the apparent percentage of methacrylic acid is not supported in Appellants' specification.

Since Lau teaches each of the claimed structural and compositional limitations, one of ordinary skill in the polymer binder art would expect that the claimed properties to naturally flow from any combination of the hydrophilic monomer and non-hydrophilic monomer within the claimed ranges as set forth above, which is emulsion polymerized using the colloid component, else the claimed invention would not appear to be operable. Lau clearly teaches the ranges, wherein the methacrylic acid component or hydrophilic monomer is about 100 weight percent, and the component is emulsion polymerized using a colloid, as set forth above. Juxtaposed with Appellants' claimed invention, the properties should equally be inherent to the invention of Lau.

Regarding Appellants' argument that Lau does not disclose or teach that a colloid stabilizer can be critical to salt-sensitivity and redispersibility in water, Examiner respectfully disagrees. Although Appellants appeared to argue that the percentage of methacrylic acid is critical to salt-sensitivity, Appellants are now arguing that the colloid stabilizer is critical to salt-sensitivity and re-dispersibility in water. It should be noted that neither Appellants' specification nor the claimed invention recite that the colloid stabilizer is critical to salt-sensitivity and re-

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dispersibility in water. As set forth above, Lau teaches an emulsion polymerization process comprising emulsifiers or dispersing agents employed for preparing the monomer or polymer emulsions which may be from about 0.1% to about 10% by weight (Id., column 5 line 63 to column 6 line 11). It should be noted that Appellants do not claim a specific colloid in the claims and that Appellants specification does not specify a polymeric colloid necessarily suitable for the claimed invention. Additionally, Appellants' Declaration of March 6, 2007, at section 5, recites that generally in emulsion polymerization processes, "a stabilizing agent is provided to an aqueous medium wherein the stabilizing agent may include surfactants, emulsifiers, protective colloids or the like." Therefore, the emulsifiers or dispersing agents of Lau appear to be within the scope of the claimed polymeric colloid component, absent evidence to the contrary, and one of ordinary skill in the polymeric binder art would expect the binder of the prior art to perform in a substantially similar and/or identical manner as the claimed invention.

Appellants argue that the invention is novel and nonobvious because of divalent ion resistance, as claimed in claim 27. Examiner respectfully disagrees. As set forth above, since Lau teaches a substantially similar structure and composition as the claimed invention, the claimed divalent ion characteristics appear to be inherent to the invention of Lau, absent evidence to the contrary. Therefore, one of ordinary skill in the polymeric binder art would expect that the polymeric binder of Lau would behave in a substantially similar manner as the claimed invention, absent evidence to the contrary.

Rejection of Claims 8, 10, 13, 18-23, 26, and 27 under 35 U.S.C. 102(b) as being anticipated by, or alternatively under 35 U.S.C. 103(a) as obvious over Komatsu.

Contrary to the current rejection Appellants argue that Komatsu discloses solution-based salt-sensitive polymers which are solution polymerized unlike the claimed emulsion binders. Appellants argue that although Komatsu teaches an “‘emulsion’ form,” it is clear a water soluble polymer is involved. Additionally, Appellants argue that Komatsu teaches away from the claimed invention in that Komatsu is inoperable in the presence of polyvalent salts, and that Komatsu teaches solution polymers rather than latexes. Additionally, Appellants argue that the “binder system used in connection with the invention has superior properties.” Additionally, Appellants argue that Komatsu does not recognize that a colloid stabilizer can be critical to salt-sensitivity.

Regarding Appellants’ arguments, Examiner respectfully disagrees. As recited above, the use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain. A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. MPEP 2123.

Appellants argue that Komatsu uses solution polymerization techniques which are fundamentally different from the emulsion polymerization techniques used to fabricate the latex binders of the present invention. It should be noted that Appellants' Brief at page 14 appears to recite that an emulsion and a latex binder are analogous (“No reference even remotely suggests an emulsion, i.e. latex binder that is salt-sensitive.”).

Appellants argue that Komatsu uses solution polymerization techniques. Essentially, Appellants are arguing that the claimed invention and the invention of Komatsu are distinguished

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since they are formed by a different processes. However, Appellants do not set forth structural or compositional differences between the claimed invention and the invention of Komatsu which necessarily result from emulsion polymerization. For example, Appellants do not argue that Komatsu is deficient in the structural and compositional limitations of the claimed invention. The characteristics or properties of the resulting emulsion polymerized polymer component is a film that is dispersible in tap water and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt. Komatsu teaches that the resulting invention is a self-dispersing polymer emulsion which is dispersible in tap water but insoluble in water containing at least 0.2% of an inorganic salt (*see for example* Komatsu, column 5 lines 45-57). Therefore, the characteristics or properties of the self-dispersing polymer emulsion appear to be substantially similar and/or identical to the claimed invention, absent evidence to the contrary.

Additionally, Komatsu does not appear to specifically recite that the invention of Komatsu uses solution polymerization techniques. Komatsu teaches and recognizes that most polymer emulsions are produced by an emulsion polymerization process (Komatsu, column 1 lines 14-27). Although Appellants appear to narrowly construe emulsion polymerizing the polymer component, Komatsu appears to teach the process limitation and/or the resulting composite binder with the claimed characteristics and properties.

Appellants argue that Komatsu teaches away from the claimed invention in that Komatsu is inoperable in the presence of polyvalent salts. Specifically, Appellants argue that the latex polymers of the claimed invention are emulsion polymerized in the presence of mono, di or trivalent salts. It should be noted that the claimed invention does not set forth emulsion polymerizing the polymer component in the presence of mono, di or trivalent salts. Additionally,

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the March 2007 Declaration and paragraph 0027 of Appellants' specification, cited as support for Appellants' arguments, do not recite emulsion polymerizing the polymer component in the presence of mono, di or trivalent salts. Therefore, Appellants' arguments appear to be outside the scope of the claimed invention.

Regarding Appellants' argument that the invention of Komatsu is inoperable in the presence of polyvalent salts, Examiner respectfully disagrees. The portion of Komatsu recited by Appellants is directed to an intermediate during the process of forming the product of Komatsu. A plain reading of Komatsu shows that the addition of a polyvalent cation after the neutralization of the acrylic acid moiety would make the formation of the self-dispersing emulsion impossible. The self-dispersing emulsion product has not been produced since addition of a polyvalent cation during the process of forming the product would result in the incapability of the product being formed. Clearly, the portion cited does not refer to the final product. Additionally, as is shown in column 6 lines 60-62 and in the Examples of Komatsu, the solubility of the product of Komatsu is tested in tap water containing calcium chloride (a polyvalent salt) and sodium chloride. The Examples set forth that the invention of Komatsu is dispersible in tap water but is insoluble in 0.2% aqueous common salt solution.

Regarding Appellants' argument that Komatsu teaches solution polymers rather than latexes, Examiner respectfully disagrees. Komatsu teaches that the resulting invention is a self-dispersing polymer emulsion which is dispersible in tap water but insoluble in water containing at least 0.2% of an inorganic salt. As set forth above, Appellants recite that emulsion binders and latex binders are analogous. Additionally, Appellants do not set forth any structural or

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compositional differences which would further differentiate the emulsion binder of Komatsu and the claimed latex binder.

Regarding Appellants' argument that the claimed binder has superior properties, Examiner respectfully disagrees. Appellants recite paragraphs 8 and 9 of the March 2007 Declaration, which recite that the claimed invention does not require "large amounts of extremely hydrophilic monomers" and that emulsion polymerized resins have significant advantages over solution polymerized resins, such as lower viscosity for a given solids content.

Appellants do not provide any evidence or data of superior properties, nor do Appellants claim any properties which may be superior other than the claimed dispersibility in tap water and non-dispersibility in aqueous solutions containing an inorganic salt. Additionally, Appellants do not provide objective evidence that the invention of the prior art necessarily does not comprise the claimed properties.

While the prior art does teaches a weight percentage of acrylic acid from 35% to 65%, Appellants' claimed invention teaches 1 to 100 weight percent of a hydrophilic monomer including acrylic acid. The prior art may objectively require "large amounts" of acrylic acid, as Appellants suggest, but Appellants' claimed invention teaches arguably much larger amounts of acrylic acid. Komatsu teaches a water-dispersible composition as a latex binder comprising a polymer component which includes from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by weight of at least one non-hydrophilic monomer and a polymeric colloid component. Appellants' argument does not appear to distinguish the claimed invention from the prior art.

Regarding Appellants' second argument that emulsion polymerization techniques enable the production of high solids compositions, Examiner respectfully disagrees. It should be noted that Appellants do not claim any solids content. Appellants' disclosure appears to teach a solids content of most preferably from 10 to 25 percent (Appellants' specification, page 7 lines 15-20). Additionally, Appellants' Examples appear to disclose solids content from 12 to 16 percent. Although Appellants argue in paragraph 9 of the Declaration that '129 Eknoian patent has a solids content of 29.7%, Komatsu teaches a solids content of 17.9% which appears to be substantially similar to the claimed invention and the ' 129 Eknoian patent.

Appellants also argue differences in viscosities, specifically that the product of Komatsu has a viscosity of 500 cps whereas the '129 Eknoian patent has a viscosity of 136 cps. It should be noted that Appellants do not claim a specific viscosity nor does Appellants' specification disclose a viscosity. Appellants appear to argue a correlation between low viscosity and high solids content which is unique to the claimed invention. However, as set forth in the previous paragraph, the claimed polymer composition and the polymer composition in Komatsu appear to have substantially similar solids content. Additionally, while Komatsu teaches one embodiment with a viscosity of cps, in Examples 1-9 of Komatsu, the viscosity is variable between 30 cps and 700 cps depending on the manner of preparation. Specifically, Komatsu teaches a viscosity of 105 cps (Example 8), 65 cps (Example 5), and 230 cps (Example 3), which appear substantially similar to the '129 Eknoian viscosity.

Regarding Appellants' argument that Komatsu does not disclose or teach that a colloid stabilizer can be critical to salt-sensitivity, Examiner respectfully disagrees. It should be noted that neither Appellants' specification nor the claimed invention recite that the colloid stabilizer is

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critical to salt-sensitivity and re-dispersibility in water. Additionally, it should be noted that Appellants do not claim a specific colloid in the claims and that Appellants specification does not specify a polymeric colloid necessarily suitable for the claimed invention. Additionally, Appellants' Declaration of March 6, 2007, at section 5, recites that generally in emulsion polymerization processes, "a stabilizing agent is provided to an aqueous medium wherein the stabilizing agent may include surfactants, emulsifiers, protective colloids or the like." As set forth above, Komatsu appears to teach a substantially similar structure and composition as the claimed invention. Therefore, one of ordinary skill in the polymeric binder art would expect the binder of the prior art to perform in a substantially similar and/or identical manner as the claimed invention.

Rejection of Claims 8, 10, 13, 18-23, 26, and 27 under 35 U.S.C. 103(a) as obvious over Komatsu in view of Lau.

Contrary to the current rejection, Appellants argue that Examiner has cited no motivation to combine Komatsu and Lau. Additionally, Appellants argue that even if one made the combination, neither reference discloses or suggest salt sensitive latexes that break up into particles in the presence of tap water. Additionally, Appellants reiterate the previous arguments regarding the colloid stability being critical to salt-sensitivity redispersibility and divalent ions do not inhibit re-dispersibility. Since these latter two arguments were previously addressed and Examiner's response equally applies here, Examiner's response is not repeated.

Regarding Appellants' argument that Examiner has cited no motivation to combine Komatsu and Lau, Examiner respectfully disagrees. As set forth above, in the event it is shown

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that Komatsu does not teach a polymer composition formed by emulsion polymerization using a colloid component as a stabilizer, Lau teaches a similar composition suitable as a nonwoven binder comprising from 1 to 100 weight percent of a hydrophilic monomer, and from 0 to 99 percent by weight of at least one non-hydrophilic monomer and a polymeric colloid component, wherein the composition may be prepared by solution or emulsion polymerization (Lau, column 2 lines 27-52, column 4 lines 9- 37, column 5 line 7 to column 6 line 11, column 8 lines 12-24). Therefore, it would have been obvious to one of ordinary skill in the polymeric binder art at the time the invention was made to form the binder of Komatsu with the polymerization methods taught by Lau, as the method of Lau is an equivalent method of forming an emulsion binder for use as a nonwoven binder.

Regarding Appellants' argument that even if one made the combination, neither reference discloses salt-sensitive latexes that break up into particles in the presence of water, Examiner respectfully disagrees. The prior art teaches that the resulting invention is a self-dispersing polymer emulsion and/or latex film which is dispersible in tap water but insoluble in water containing at least 0.2% of an inorganic salt (*see for example* Komatsu, column 5 lines 45-57; Lau, Example 7). Therefore, the characteristics or properties of the self-dispersing polymer emulsion formed from the prior art combination appear to be substantially similar and/or identical to the claimed invention, and inherent to the prior art combination, absent evidence to the contrary. Additionally, Appellants have not provided evidence showing that the prior art combination is not a salt-sensitive latex that breaks up into particles in the presence of water.

Rejection of Claims 2-6, 9, 11, 12, 16, and 25 under 35 U.S.C. 103(a) as obvious over
Lau in view of Tsai.

Contrary to the current rejection, Appellants argue that there is no motivation to make the combination of references proposed. Additionally, Appellants argue that even if the combination were made, an incomplete reconstruction of the invention results since a salt sensitive latex is absent from the references. Additionally, Appellants argue that nothing in Tsai supplements Lau in any meaningful way. Additionally, Appellants reiterate the argument that the prior art does not recognize that a colloid stabilizer can be critical to salt-sensitivity re-dispersibility. Since the last argument was previously addressed and the response to that argument equally applies here, Examiner's response is not repeated.

Regarding Appellants' argument that there is no motivation to combine the references, Examiner respectfully disagrees. Lau is silent with regards to specific properties of the non-woven material. Therefore, it would have been necessary and thus obvious to look to the prior art for conventional materials. Tsai provides this conventional teaching showing that it is known in the water-dispersible fabric art to use wood pulp fibers having a length of less than 0.5 cm in an air-laid non-woven material comprising 70 to 85 percent by weight of fibers, the non-woven material having a basis weight of from 20 to 200 gsm and further comprising a binder add-on of from 2 to 50 percent by weight (Tsai, see entire document including column 6 lines 38-58, column 5 lines 40-44, column 7 lines 10-18, column 7 lines 30- 50, Examples 10-16). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the non-woven material from Lau with the specific properties, as taught by Tsai, motivated by the expectation of successfully practicing the invention of Lau.

Regarding Appellants' argument that the prior art does not specifically teach a salt sensitive latex, Examiner respectfully disagrees. As set forth above, in totality, Lau teaches a non-woven material comprising a web of fibers, and a latex polymer binder having the claimed glass transition temperature and comprising the claimed polymer component with the claimed hydrophilic monomer and the claimed non-hydrophilic monomer in the claimed percentages, and the claimed polymeric colloid component which is emulsion polymerized. As recited in the rejection of the claims based on Lau, Lau does not appear to teach that the latex polymer composition forms films that are dispersible rather than soluble in tap water in that a film formed from the polymer breaks into small discrete particles that can be filtered out, and non-dispersible in aqueous solutions containing 0.5 weight percent or more of an inorganic salt. However, the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *See* MPEP 2112. There is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of invention, but only that the subject matter is in fact inherent in the prior art reference.

The claimed properties are deemed to be inherent to the structure in the prior art since the prior art teaches an invention with a substantially similar structure and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Appellants to prove otherwise. Additionally, it would have been obvious to one of ordinary skill in the emulsion binder art at the time the invention was made to form the emulsion binder of the prior art wherein the polymer component comprises 100 weight percent of a hydrophilic monomer and the hydrophilic monomer is methacrylic acid, as the prior art teaches that the hydrophilic monomer may comprise about 100 weight percent and the use of the

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optimum or workable ranges discovered by routine experimentation is within the ordinary skill in the art. In this optimization, the properties would additionally appear to be inherent.

Regarding Appellants' argument that there is nothing that supplements Lau in any meaningful way, Examiner respectfully disagrees. Tsai is relied on to teach the specific structure, composition, characteristics and properties of the non-woven material.

Rejection of Claims 2-6, 9, 11, 12, 16, and 25 under 35 U.S.C. 103(a) as obvious over
Komatsu in view of Tsai.

Contrary to the current rejection, Appellants argue that there is no motivation to make the combination of references proposed. Additionally, Appellants argue that even if the combination were made, an incomplete reconstruction of the invention results since a salt sensitive latex is absent from the references. Additionally, Appellants reiterate the argument that the prior art does not recognize that a colloid stabilizer can be critical to salt-sensitivity re-dispersibility. Since the last argument was previously addressed and the response to that argument equally applies here, Examiner's response is not repeated.

Regarding Appellants' arguments, Examiner respectfully disagrees. As set forth above, Komatsu is silent with regards to specific properties of the non-woven material. Therefore, it would have been necessary and thus obvious to look to the prior art for conventional materials. Tsai provides this conventional teaching showing that it is known in the water-dispersible fabric art to use wood pulp fibers having a length of less than 0.5 cm in an air-laid non-woven material comprising 70 to 85 percent by weight of fibers, the non-woven material having a basis weight of from 20 to 200 gsm and further comprising a binder add-on of from 2 to 50 percent by weight

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(Tsai, see entire document including column 6 lines 38-58, column 5 lines 40-44, column 7 lines 10-18, column 7 lines 30- 50, Examples 10-16). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the non-woven material from Komatsu with the specific properties, as taught by Tsai, motivated by the expectation of successfully practicing the invention of Komatsu.

Regarding Appellants' argument that even if one made the combination, neither reference discloses salt-sensitive latexes that break up into particles in the presence of water, Examiner respectfully disagrees. The prior art teaches that the resulting invention is a self-dispersing polymer emulsion and/or latex film which is dispersible in tap water but insoluble in water containing at least 0.2% of an inorganic salt (*see for example* Komatsu, column 5 lines 45-57). Therefore, the characteristics or properties of the self-dispersing polymer emulsion formed from the prior art combination appear to be substantially similar and/or identical to the claimed invention, and inherent to the prior art combination, absent evidence to the contrary. Additionally, Appellants have not provided evidence showing that the prior art combination is not a salt-sensitive latex that breaks up into particles in the presence of water.

Rejection of Claims 2-6, 9, 11, 12, 16, and 25 under 35 U.S.C. 103(a) as obvious over Komatsu in view of Lau and further in view of Tsai.

Contrary to the current rejection, Appellants argue that there is no motivation to make the combination of references proposed. Additionally, Appellants argue that even if the combination were made, an incomplete reconstruction of the invention results since a salt sensitive latex is absent from the references. Additionally, Appellants reiterate the argument that the prior art

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does not recognize that a colloid stabilizer can be critical to salt-sensitivity re-dispersibility. Since the last argument was previously addressed and the response to that argument equally applies here, Examiner's response is not repeated.

Regarding Appellants' arguments, Examiner respectfully disagrees. As set forth above, Komatsu in view of Lau is silent with regards to specific properties of the non-woven material. Therefore, it would have been necessary and thus obvious to look to the prior art for conventional materials. Tsai provides this conventional teaching showing that it is known in the water-dispersible fabric art to use wood pulp fibers having a length of less than 0.5 cm in an air-laid non-woven material comprising 70 to 85 percent by weight of fibers, the non-woven material having a basis weight of from 20 to 200 gsm and further comprising a binder add-on of from 2 to 50 percent by weight (Tsai, see entire document including column 6 lines 38-58, column 5 lines 40-44, column 7 lines 10-18, column 7 lines 30-50, Examples 10-16). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the non-woven material of the prior art with the specific properties, as taught by Tsai, motivated by the expectation of successfully practicing the invention of the prior art.

Regarding Appellants' argument that even if one made the combination, neither reference discloses salt-sensitive latexes that break up into particles in the presence of water, Examiner respectfully disagrees. The prior art teaches that the resulting invention is a self-dispersing polymer emulsion and/or latex film which is dispersible in tap water but insoluble in water containing at least 0.2% of an inorganic salt (*see for example* Komatsu, column 5 lines 45-57; Lau, Example 7). Therefore, the characteristics or properties of the self-dispersing polymer emulsion formed from the prior art combination appear to be substantially similar and/or

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identical to the claimed invention, and inherent to the prior art combination, absent evidence to the contrary. Additionally, Appellants have not provided evidence showing that the prior art combination is not a salt-sensitive latex that breaks up into particles in the presence of water.

Declaration Evidence

Appellants argue that the Rejections fail to consider the Declaration Evidence, specifically the July 2007 Declaration. Examiner respectfully disagrees. As recited in this Examiner's Answer, and in the Final Rejection of September 24, 2007, sections 5 and 7, the Declaration was properly addressed and deemed not persuasive. For example, the Declaration recites as an opinion that the polymers of Lau are not dispersible in water, apparently due to the concentration of methacrylic acid, which is directly contrary to the claimed invention and Appellants' specification.

As set forth above, the Declaration argues that the emulsion polymers of Lau are not dispersible in water, and their dispersibility would not change in response to salt concentration. The Declaration appears to suggest, as recited in Appellants' Brief at page 17, that polymers comprising only 0, 1 or 2% methacrylic acid would not be dispersible in water. Therefore, it appears that Appellants are arguing that the percentage of methacrylic acid, which Appellants' specification teaches comprise the hydrophilic monomer, is necessarily required to be greater than 2%. However, the Declaration is not persuasive for myriad reasons. First, the Declaration does not distinguish the claimed invention from the invention of Lau. Appellants' claimed invention requires 1 to 100 weight percent of a hydrophilic monomer (which may be methacrylic acid) and from 0 to 99 weight percent of at least one non-hydrophilic monomer (which may be

methacrylates) which is emulsion polymerized. Similarly, as set forth above, Lau teaches the claimed hydrophilic monomer and the claimed non-hydrophilic monomer.

Second, the Declaration only sets forth an opinion and a conclusion which are not supported by objective evidence. For example, the Declaration sets forth that the emulsion polymers shown in Table 4.2 of Lau are not dispersible in water, nor would their dispersibility change in response to salt concentration. However, the Declaration does not provide supporting data for such a conclusion, nor does the Declaration recite that experiments were performed using the emulsion polymers of Lau in order to arrive at such a conclusion.

Third, contrary to Appellants' Declaration of July 2007, Appellants' specification does not teach or suggest that the percentage of the methacrylic acid is specifically either critical to the dispersibility property or that the percentage of methacrylic acid is necessarily required to be greater than 2%. Therefore, the Declaration's conclusion that the emulsion polymers are not dispersible in water due to the apparent percentage of methacrylic acid is not supported in Appellants' specification.

Since Lau teaches each of the claimed structural and compositional limitations, one of ordinary skill in the polymer binder art would expect that the claimed properties to naturally flow from any combination of the hydrophilic monomer and non-hydrophilic monomer within the claimed ranges as set forth above, which is emulsion polymerized using the colloid component, else the claimed invention would not appear to be operable. Lau clearly teaches the ranges, wherein the methacrylic acid component or hydrophilic monomer is about 100 weight percent, and the component is emulsion polymerized using a colloid, as set forth above. Juxtaposed with Appellants' claimed invention, the properties should equally be inherent to the invention of Lau.

Additionally, Appellants argue that it is clear to Declarant, that Komatsu teaches binder resins which are water soluble. However, as set forth above, Komatsu teaches a self-dispersing polymer emulsion which is dispersible in ordinary tap water but insoluble in water containing at least 0.2% of an inorganic salt. Additionally, Appellants do not provide supporting data for such a conclusion, nor does the Declaration recite that experiments were performed using the emulsion polymers of Komatsu in order to arrive at such a conclusion.

Superior Results

Appellants argue that the record is replete with unexpected, superior results including abundant examples and that Examiner has not objectively evaluated such evidence. Specifically, Appellants cite the Declaration of September 12, 2005 in support. It should be noted that the prosecution history does not show any Declaration of September 12, 2005. However, it is presumed that Appellants intended to cite the Declaration of September 14, 2005.

Regarding Appellants' arguments, Examiner respectfully disagrees that Appellants have shown unexpected, superior results. Appellants' Declaration is not persuasive for many reasons. First, the Declaration does not compare the currently claimed invention to the closest prior art recited in the rejections on Appeal. Second, it is unclear how the Declaration applies to the current set of claims and how the Declaration differentiates the currently claimed invention from the prior art recited in the rejections on Appeal since, as set forth above, the prior art teaches substantially similar structures and compositions as the claimed invention and the prior art teaches a self-dispersing polymer emulsion and/or latex film which is dispersible in tap water but insoluble in water containing at least 0.2% of an inorganic salt. Third, Appellants' September

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2005 Declaration appears to teach that emulsion binders formed with polymers which are not fully water-soluble result in superior results due to enhanced processability of emulsion binders. However, the prior art teaches the substantially similar and/or identical emulsion binders with polymers which are not fully water-soluble. Therefore, as best Examiner can determine, the September 2005 Declaration teaches results over the Cole reference, which is not prior art cited in the rejections on Appeal.

Additionally, Appellants have not shown or demonstrated that any results are superior or unexpected. Different characteristics do not necessarily lead to the conclusion that results are unexpected. It is well-settled that unsupported arguments are not a substitute for objective evidence. *In re Pearson*, 494 F.2d 1399, 1405, 181 USPQ 641, 646 (CCPA 1974). Appellants have not shown or demonstrated through objective evidence that the prior art does not teach the claimed limitations and properties and that the prior art is incapable of performing in a substantially similar and/or identical manner as the claimed invention.

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(11) Related Proceeding(s) Appendix

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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